Menlo Park Notebook #204 [N-82-05-26]

This notebook covers the periods May-July 1882, March 1883, and April 1885. The entries are by Edison and John Ott. Some of the entries were witnessed by Charles T. Hughes. Most of the material relates to electric lighting. Included are drawings of armatures and notes and drawings of automatic voltage regulators, lamps, and meters. Included also are notes and drawings of the sextuplex telegraph and notes relating to a process for compressing bran. A few pages appear to have been used by a child for drawing, writing, and math exercises. The book contains 278 numbered pages.

Blank pages not filmed: 8-9, 80-89, 112-119, 126-137, 144-147, 150-151, 154-161, 170-203, 208-237, 256-261, 266-271.

Missing page numbers: 97-98, 109-110, 273-274.

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From Library

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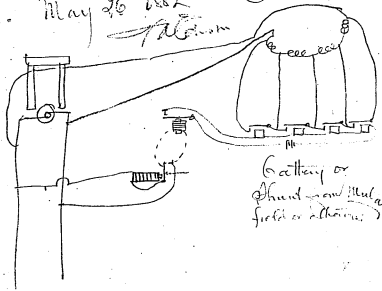
May 1, 1896

Automatic Regulation

May 26 1882

T A Edison



Battery or Shunt from Mul arc field or Armature)

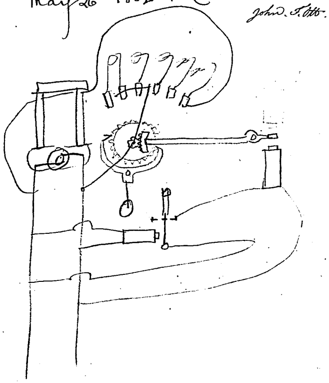
Works bang up

John F. Ott

Automatic Regulation

May 26 1882 T A Edison

John F. Ott.



250 | 6000
00000
15000
250
00000
410

. 36 El

8.

1
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3

3

372.

.32.

2.16

. 250

12.

6 | 66

~~150~~

2.50.
50
12
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3.72.

20
.4
2
40.

1

4

25

250.

44
25
220
98
200.

3

50
5
25.0

3.

.600.

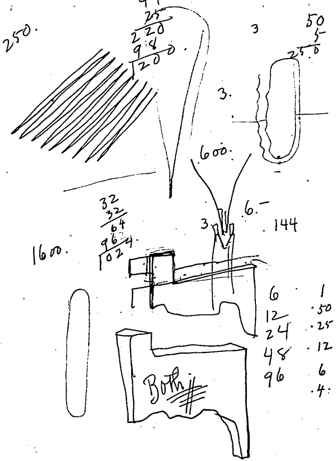
6.–

3

. 144

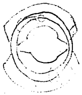
32
32
64
96
1024.

1600.

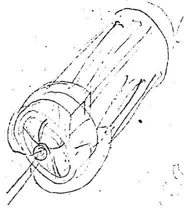


6	1
12	.50
24	.25
48	.12
96	6
	.4.

Pour Cotton's on parafine
Glox -



[illegible] fuel gage
indicator



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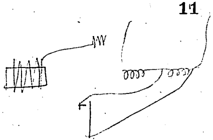


1½ 6 = 70.
4000.

1000
10

20

3.

1

40.

-40

70

1

1/4

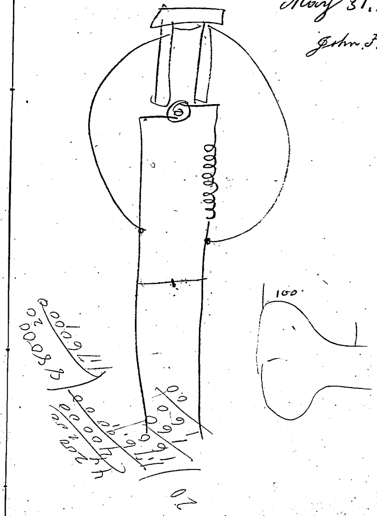
½

$\frac{1}{5}$

[illegible]

May 31, 1882

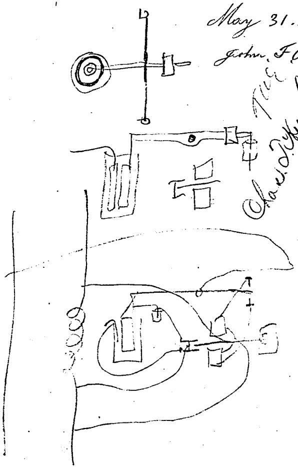
John F. Ott



May 31. 1882

John F. Ott.

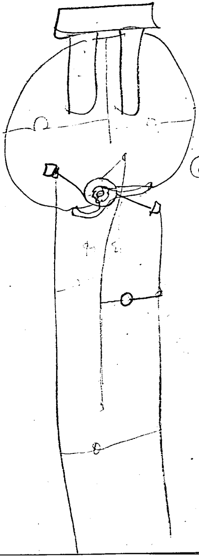
Chas T. Hughes



May 31. 1882

John F. Ott

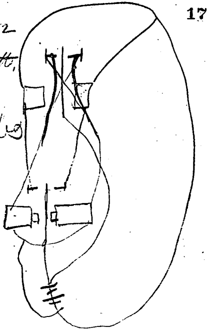
Chas T. Hughes

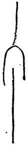


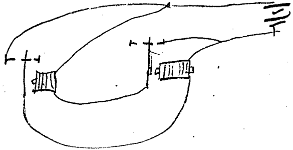
$12,25 -

May 31, 1882
John F. Ott,

Chas. T. Hughes







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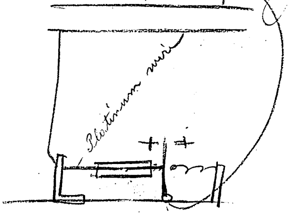
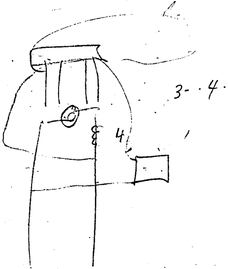
May 31. 1882

John F. Ott
Chas. T. Hughes


Platinum wire
+
+

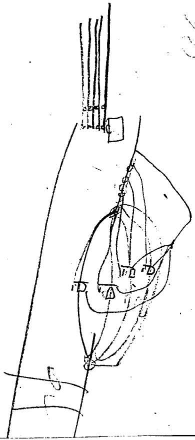


May 31. 1882

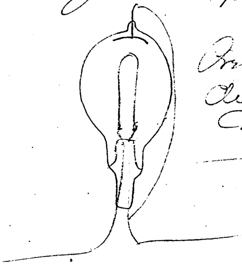
John F. Ott.

TAE

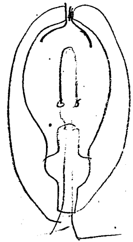
Chas. T. Hughes



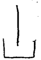
July 5 1882
TAE



Prevent
Electrical
Carrying



30 Lamps 11 less ½ bat,



Lamp			Sec	
35	=	12 strokes	50	
35		12 "	51	
				10
40		12 "	40 39. 39.	5
45			34 34 34	5
50			29 29	2
55			27 27	3

60.	24 24	
65	21 21	3
		2
70	19 19	

Curve on dash ~~pot magnet meter~~ with Beam

F & E.

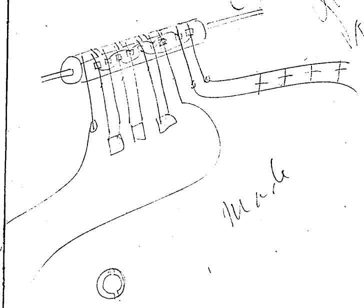
July 5 1882

John F. Ott.

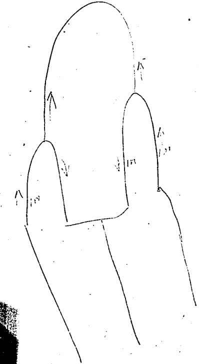
1000, 975 75 90, 150

Chas. T. Hughes

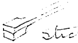
June 17 1882



Made

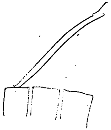


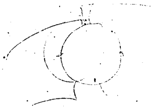
June 12 1882
TAE

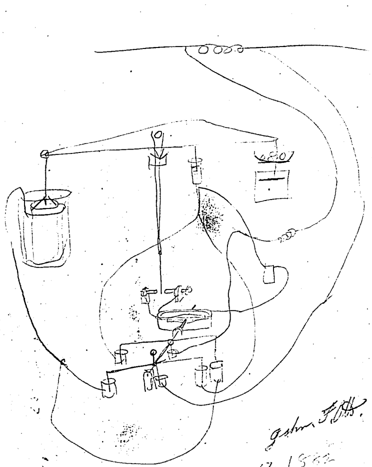


Stick [illegible] pieces
on by oxidized linseed
oil & Japan Varnish

In the [illegible]
Collodion or Nitrated
Cellulose in Nitro Benzol
or Nitro the ends of
the loop & then
stick with a Saline

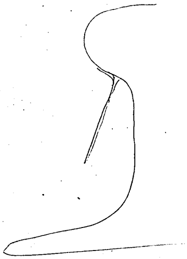




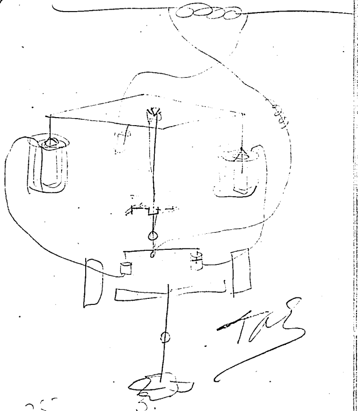


John F. Ott.

June 12 1882



June 12, 1882
John F. Ott

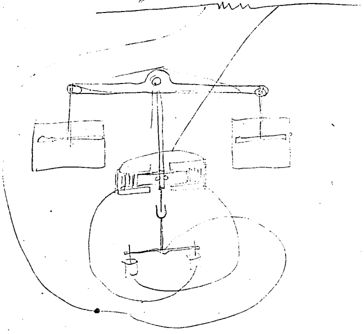


TAE

25,

June 12, 1882

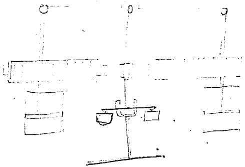
John F Ott.

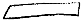


TAE

June 12, 1882
John F. Ott.

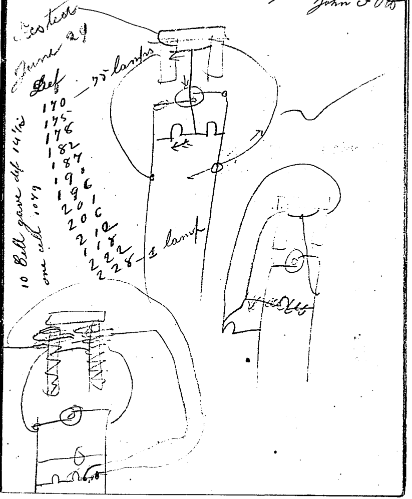
TAE





June 29 1882

John F Ott



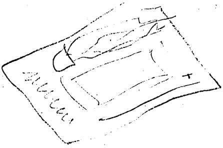
Tested June 29

Def

170 — 75 lamps
175
176
182
187
190
196
201
206
212
218
222
228 — 1 lamp

10 Bell gave def 14 1/2

one cell 1079

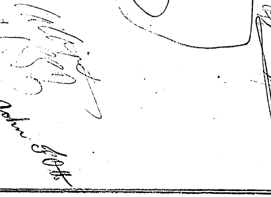


Lamp System

With 2 lamps marked A in circuit it gave the following deflections

Lamps	Def
75	170
70	171
65	175
60	182
55	188
50	194
45	200
40	205
35	210

July. 12. 1882

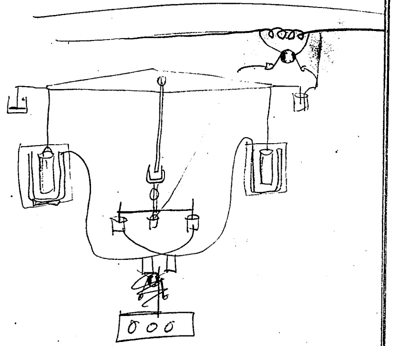


opposing coil

automatic regulators

Automatic Regulating

John Ott



John Ott Hans Kusnade

July 5 1882

J.F.O.

450 | 1350 (3
1350

450 | 2375 (5
2250
125

~~4~~50
5
225
1350
800
2375

250
160
150
150
250
~~0~~
400
10 | 4
3

2
1350
250

450 ×
100
16
160

160 | 500 (3
480

~~30~~

2
3

35
300
| 10500
$10000
45
24

250

14

10 $9\frac{1}{2}$ 950
3
2850

12

36 to 2850.

36) 250 (7 to inch

28) 250. 253 (9.

36
9
324.

325
16
1950
325
320

7

Continuation of Experiment on page 49,

Conected 4 lights in Mult arc it gave lower candle power, but increased in candle power some raise as the other.

July 12. 1882

John. F. O. H.

Also tried preasure Magnet in Mult arc. when presure became to high it closed points that closed single point sounder, closing second winding across Mult arc with Main lines. I found that it almost required thee same energy to bring the Magnet down as it took to build it up.

The two lairs on each core measured 5.8 ohms, and I found it nessiary to short sirkit this to bring the lights to a dull red

Magnet Beam dashpot

3500 35.

10000

4.

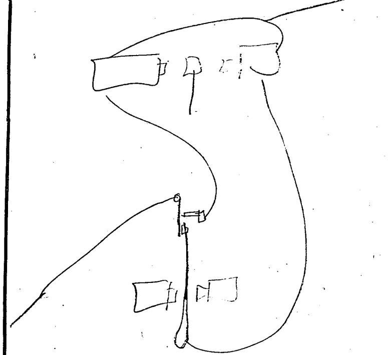
400.

$\frac{1}{100}$

2500
3500
100

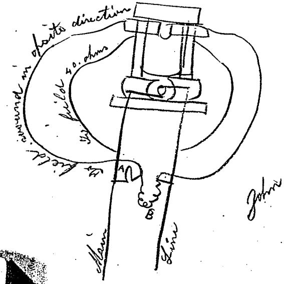
3500
25
17500
7000
87500
400) 800
9400
350

218
4
8400



July 20, 1882

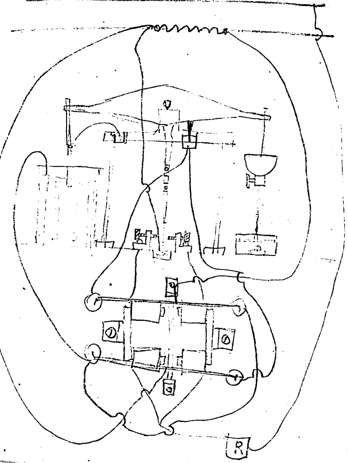
Tested the following conections as current regulator or pressure regulator A. represents group of lamps. B. Copper shunt or resistan


2d field wound in opposite direction
1st field 40. ohms
A
B
Main
Line

John F. Ott.

$960,173

968,70
1785.88
38981
2909

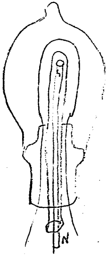


July 20. 1882

John F. Ott.

Tested Weber meter and found that the mercury changed its resistance while working, so much as to give one half the reading, after working, half day. under the same condition, or in other words same number lamps same measure

John F. Ott.



Mch 8 1883

TAE

M.N.F.

perm magnet

present Lamp

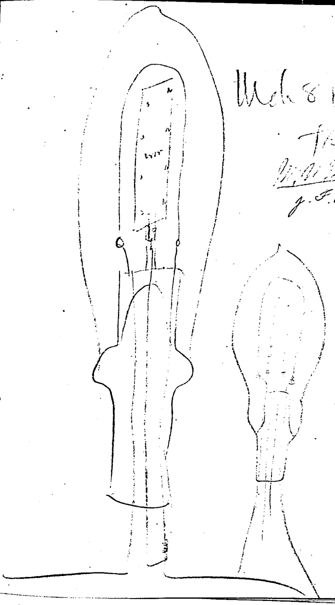
15

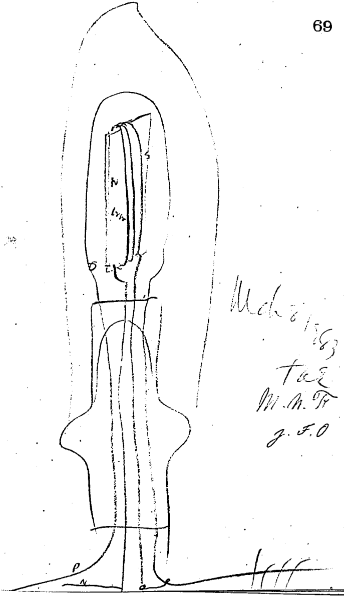
Mch 8 1883

TAE

W.H.F.

J.F.O




S
N
Lrlr
O
L
P
N
a

Mch 8 1883
TAE
M.N.T
J.F.O

Lamps Mch 8 1883 — TAE

passed thread through tragacanth & die —

Made Lamp with P filaments
Large surface ditto
N — ditto 6 oth A.T.P dont
see much change regular

Have ascertained that the eating of one of the platina wires in inside part is due to Electrolysis & conductivity of the glass — & that lime glass has less & Dutch glass still less than our regular lead glass — am going make some bulbs of these glasses TAE

Mch 8 1883 TAE

Have ascertained that Fixing Ends on Carbon can be only done with certainty by the use of a Carbohydrate Cement = No Hydrocarbon will answer at all -

am trying lot experiments get simple indicating meter Electrolytic cell with Hg + Hg [illegible] of Zinc - it is apparently difficult

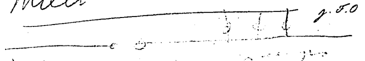
Moly 87583 Tae

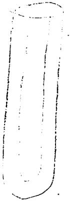
Reading Scientific Am
Loc there is a great
need of process of
Compressing Bran —.

I propose describing
[illegible] machine
Bran from which the
air is exhausted (It)
the [illegible] Contains
the Bran — this will
allow it to pack —

Meter Mch 8 1883 TAE

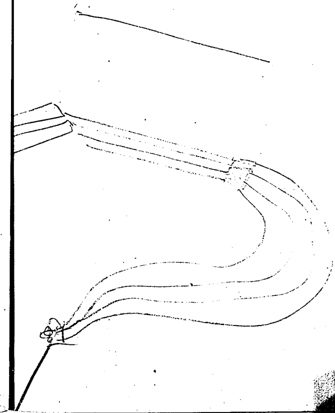
g.o.o





amalgamated Zinc
wire in Sul Zinc
deposits on one side
taken from other
until it breaks

Each drop [illegible]
certain No lamp
hours in Electromagnet [illegible]
replaces a secondary [illegible]
in ckt & destruction [illegible]
cells mean certain Bill
for light



10
3
3
4
3
2
2

250
10
2500,

30,000,

40000) 600,000,

12.

20,000

75

4

5 10000
520,000

15

247

1500
50
75000

20

150
20
3000.

69.

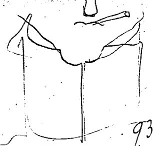
4

10.

70. 64 5

21

1200,
930
10500,



9300.
6000
15300
1200
16500
2800
5000
300
2494.

70
4

77

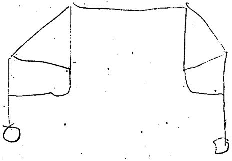
10
4
40

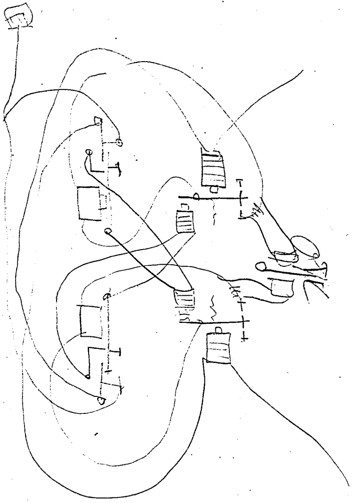
4500,
4800
9300

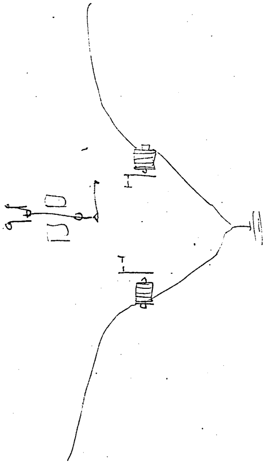
Washington

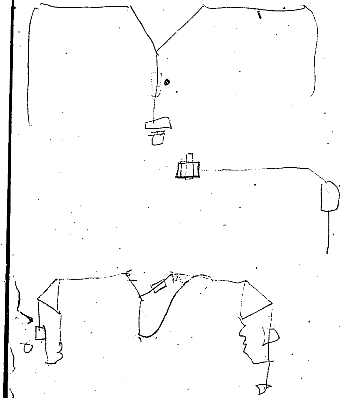
Washington

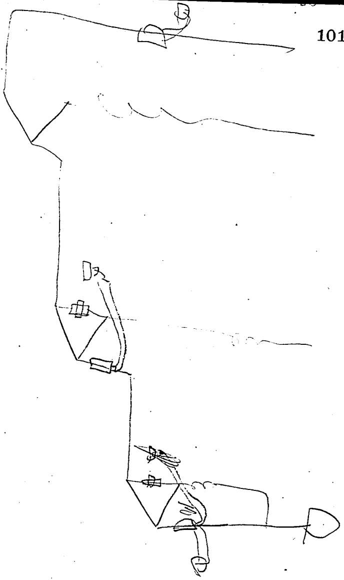
Washington

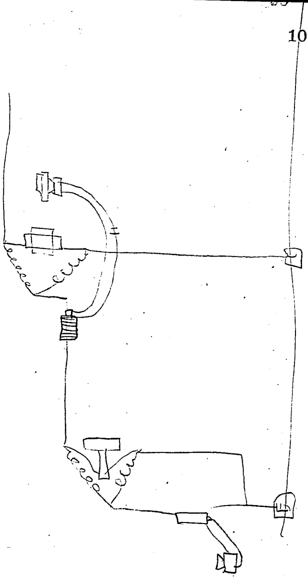


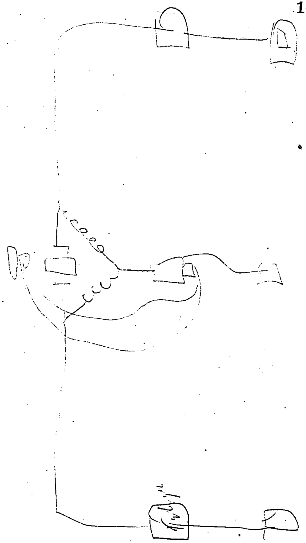


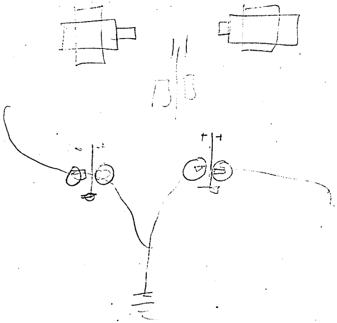


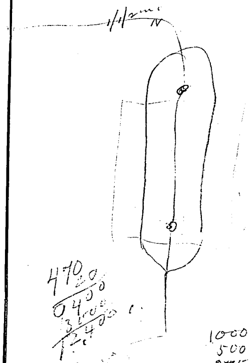












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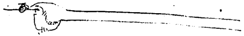
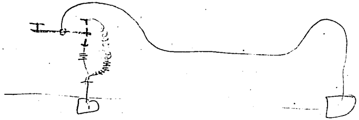
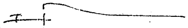
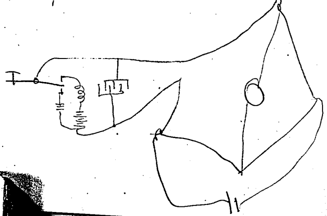
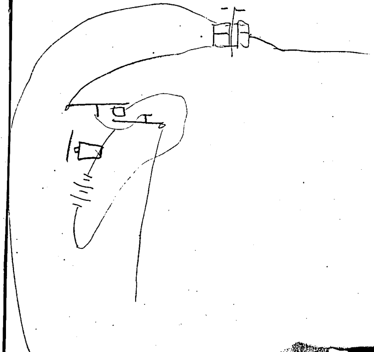
Pelion on Ossa

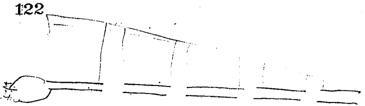


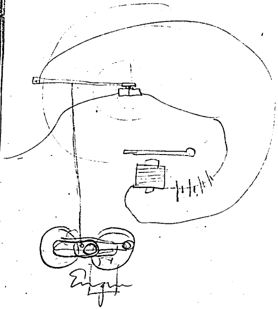








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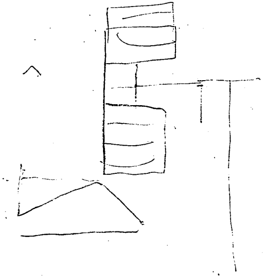

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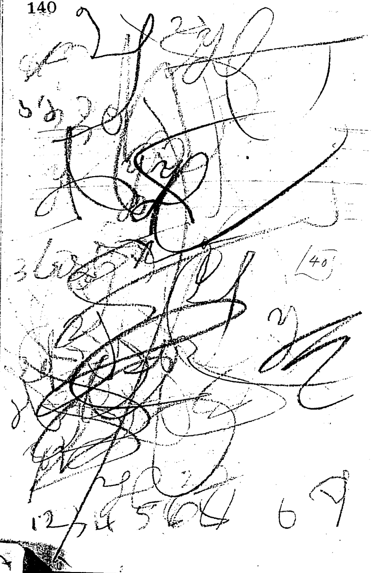
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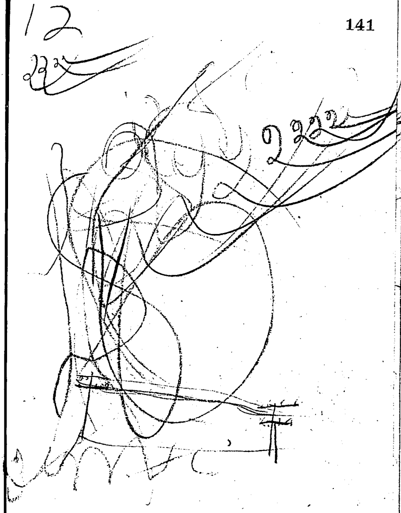
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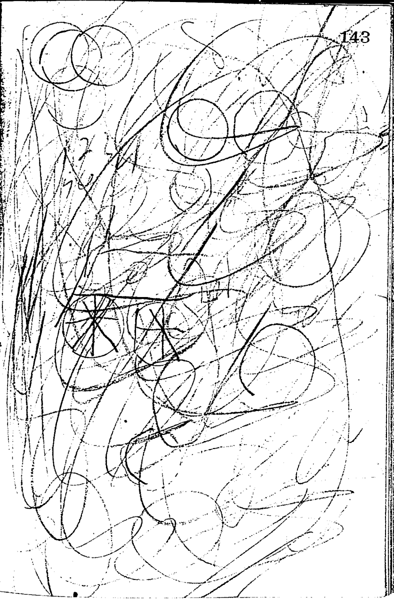

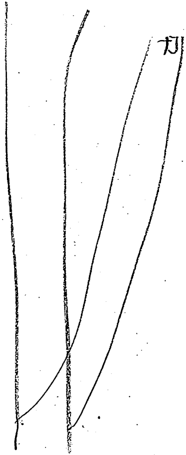
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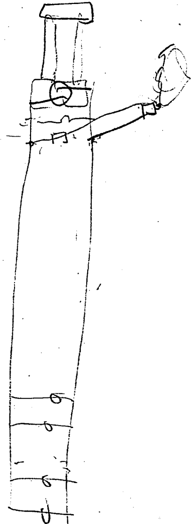

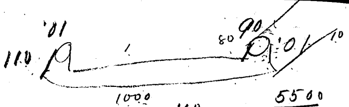

'01
110
A
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80
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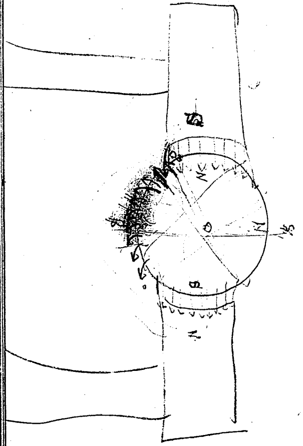

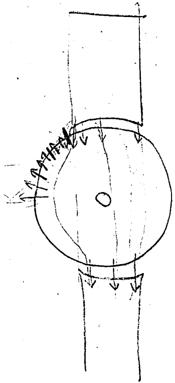

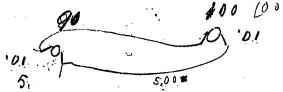
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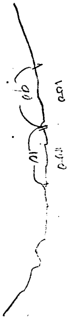
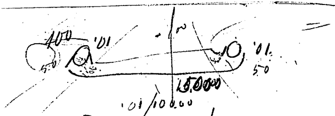


2½ — 9. —— 600 ½
25


100
'01
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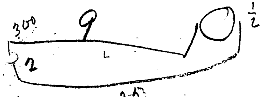
600



63 2½

10

25

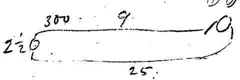
2½
63

3

600
50 | 600 | 12

300.

63
25
315
126
1575


600
300
9
10
1/2
2½
25

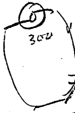
20

10

25
63/25

63×25

25
300
7500

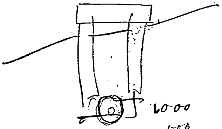


300 volts

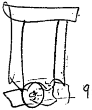
12

25 amp
300
7500
45000

7500



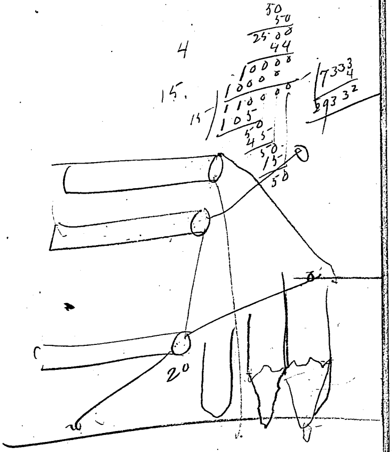
1000



425

4

15.


50
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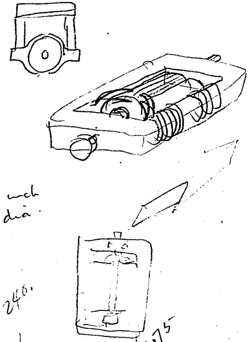
4.



10 inch
4 dia
8

240.

1

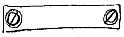
240.

3.75

150
16
900
150
2400

240) 900
720
1800
1680
1200
1200.

4) 150
21½
2
7
147.



21½

240) 500 (23
542
8 3
6 3

April 1 1885
TAE

Have Lamp Co carbonize some plates of 1/2 + 1/2 mixture Oxide manganese precip & hard Carbon with Tar ~~[illegible]~~ as binder plates for Storage

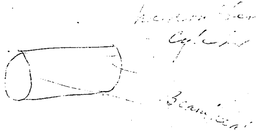
also same porous plates Carbon made with Tar, hard Carbon & baking soda

See if pure Black Tin Monoxide is Conductor

Try pure oxyd or Sulphide Tin

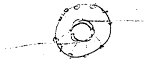
April 1 1885

TAE



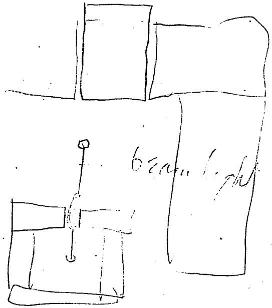
Copper wire coiled around it like screw

I



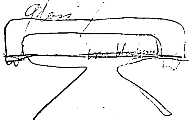
Beam charges surface rubber statically copper band is [illegible] taken it up gave Reverse Currents in telephone

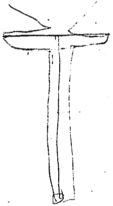
April 1 1885
TAE



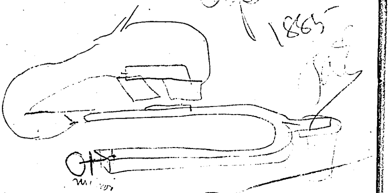
Rubber suspension
Vibrate Cord by
Expansion &c

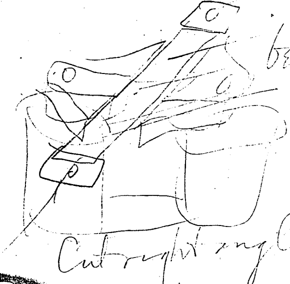
April 1 1885
TAE


beam light
vibrated
expand air
glass
Hard Rubber

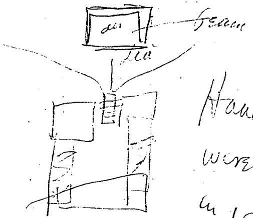

beam light
Hard Rubber

April 2nd 1885



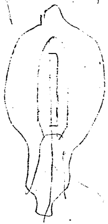


Cut right angles



april 2 1885 TAE

Have Entler wire put in 1 Candle Lamp —



Try [illegible]
wire [illegible]
also magnet
also everything to
see if cold during
carrying current

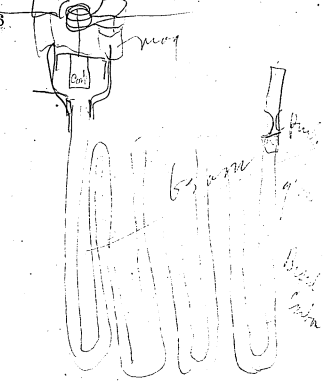
April 2 1885
TAE

get some Luminous paint. put inside globe Exhaust high vac see if sensation is great also if Electrifying it make it luminous if so make for ~~[illegible]~~ watch chain see time day nights

Lookup all the Colored Salts that are in flat scales like plumbago & try compression & mixture with clay like regular pencils Red & blue needed

also try Bronze powder pencils

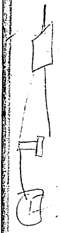
April 2 1885
TAE

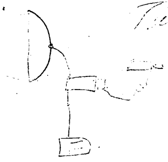


or liquid gradual Expansion

April 2 1884
TAE

April 2 1884
TAE



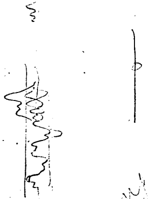


focus induction

Current free of it
will go as a beam

Quad Cable

April 2nd
1885
TAE

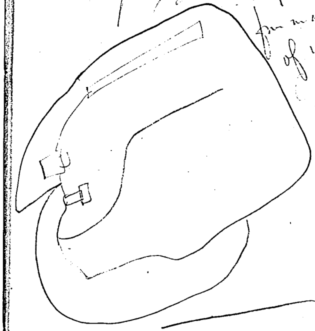


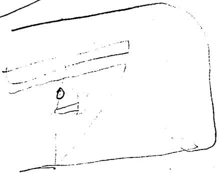
unpolarized diaphragm

polarized

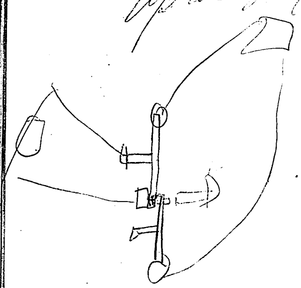
April 2 1885
TAE

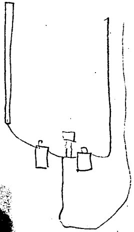
try self driving
for magnet instead
of induction
coil





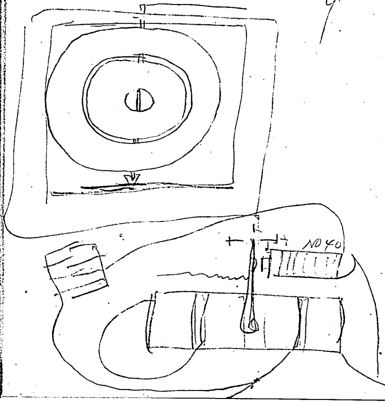
April 3rd 1886 — Tate —

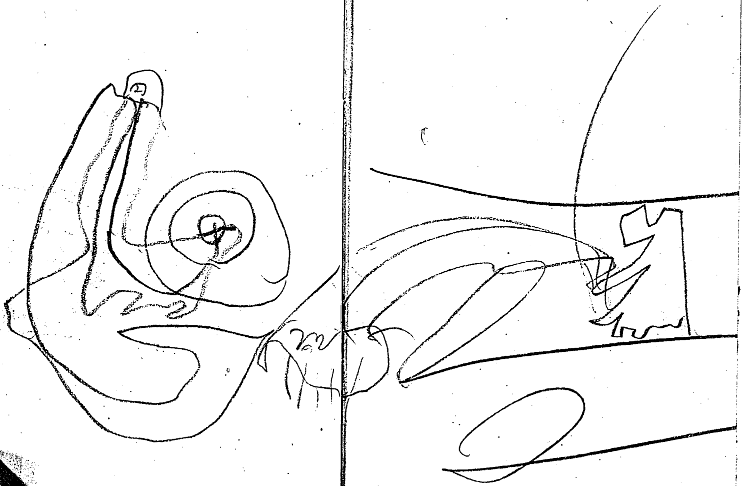




April 3rd 1886 — Tate

Sextuplex relay Coils n.c.





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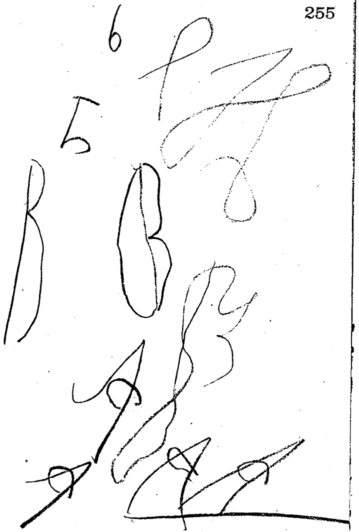
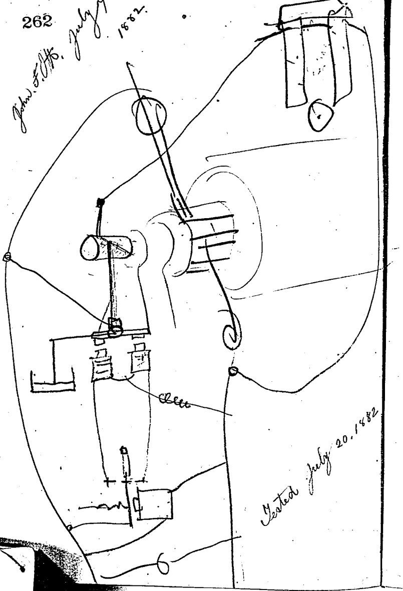


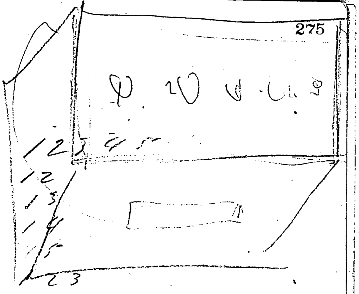
John F. Ott. July 9 1882.



Tested July 20. 1882

Tested regulator on page 262 and found that brake and brush burn out very fast and also regulated by jerks keeping a constant rise and fall to the lights. this cause was not due to imperfect workmanship, but to natural causes

264



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2900 1666

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15000
85/-

78) 85000

42

4.250
2.500

1.750
5.83

29.15

235.

Gone Off

8